

Application No.: 09/626026

Case No.: 54942US002

**REMARKS**

After entry of this amendment, claims 58-65 are pending. Claims 45, 49, 50, 52, 55, and 57 were canceled herein. Claims 58 - 65 were added herein. Support for newly added claims 58 - 65 can be found throughout the specification and at least in original claims 4 and 19, as well as page 25 to page 6, line 1.

**§ 103 Rejection of the Claims**

Claims 45, 49, 50, 52, 55, and 57 remain rejected under 35 U.S.C. § 103 as allegedly being obvious over U.S. Patent No. 4,451,635 ("Gould"), in view of U.S. Patent No. 3,931,319 ("Green") and U.S. Patent No. 4,110,286 ("Vandergaer"). Applicant respectfully traverses the rejection.

Although Applicant does not necessarily agree with this rejection, claims 45, 49, 50, 52, 55, and 57 were cancelled herein and claims 58 - 65 were added herein.

Neither Gould, Green, Vandergaer, nor the combination thereof disclose that the quaternary ammonium group could be derived from a structure such as those structures recited in claims 58 or 65. The hydrophilic polyurethanes that are employed as the starting material in Gould are made from the reaction of: one or more diols; an organic polyisocyanate or a nitrile carbonate; and a polyfunctional lactone (Gould, column 1, lines 12-34). The hydrophilic polyurethane would therefore be a polyurethane having a lactone group in the polymer backbone and providing a free (unreacted) hydroxyl group in the polymer backbone (Patent No. 4,156,066, column 1, lines 48-53 – note that this patent is cited to by Gould at column 1, lines 38-40). Such a polyurethane resin would not include a structure such as those recited in claims 58 and 65.

Furthermore, none of the reactants utilized in Gould include the structures of claims 58 or 65. The one or more diols discussed in Gould are limited to diethylene glycol and long-chain polyoxyalkylene diols (Gould, column 1, lines 15-19). Low molecular weight glycols are also generically discussed with diethylene glycol, dipropylene glycol, or aromatic glycols such as bisphenol A and 4,4'-sulfonyl diphenol being specifically mentioned (Gould, column 2, lines 18-24). All of the examples utilize a mixture of diethylene glycol and polyethylene glycol (Gould, column 4, line 61 – column 14, line 2). As shown here, none of the diols that are disclosed by

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Gould include structures as recited in claims 58 and 65. The isocyanates utilized in Gould would not be capable of providing, either once reacted with either the diol or the lactone or before reaction, a structure as recited in claims 58 and 65. The only other possible reactant that is listed in Gould as having a nitrogen in it is one of the possibilities for the lactone (i.e. where  $R_1$  is  $-CH_2NH_2$ ). Such a compound would also not provide a structure as recited in claims 58 and 65. Therefore, based on the polymer that is formed and the reactants that make the polymer, the structures recited in claims 58 and 65 can not be present in the polyurethane resin of Gould, and therefore they cannot be the basis for the quaternary ammonium as recited in claims 58 and 65.

As stated in a previous response, it is necessary to have an amine to form a quaternary ammonium group. There is not an amine within the polyurethane that is formed in Gould. The only way that an amine could be formed from the product of Gould is through hydrolysis of the urethane groups, i.e. degradation of the polymer just formed. However, degradation of the polyurethane just formed would not provide a structure as recited in claims 58 and 65; and such a modification would defeat the purpose of Gould. According to MPEP §§ 2143.01(V) and 2143.01(VI) motivation to modify a reference cannot be present if such a modification would render the reference unusable for its intended purpose or change the principle of its operation.

Furthermore, neither Gould, Green, Vandergaer, nor the combination thereof suggests that the quaternary ammonium group could be derived from such a group. Because there is no disclosure or suggestion regarding this element of claims 58 and 65, the currently pending claims are not obvious in light of these references. Applicant therefore respectfully requests that this rejection be withdrawn.

Applicant also notes that there may be other reasons why claims 58 and 65 are not obvious in light of the cited references, and independent reasons why claims 59-64 are not obvious over the cited references; Applicant does not concede such arguments by having not presented them herein.

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Conclusion

Applicant also notes that there may be other arguments which were not presented herein, and Applicant does not concede those arguments by not having presented them herein. Applicant also does not necessarily agree with the correctness of statements made in the Office Action that were not rebutted herein.

In view of the foregoing amendments, Applicants respectfully request reconsideration and allowance of the claims as all rejections have been overcome. Early notice of allowability is kindly requested. Should the Examiner feel a telephone interview would be helpful in advancing this case to allowance, Applicant invites the Examiner to contact their representative at the number provided below.

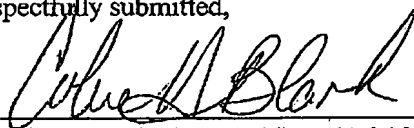
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Respectfully submitted,

October 31, 2007

Date

By:

  
Colene H. Blank, Reg. No.: 41,056  
Telephone No.: 651-737-2356

Office of Intellectual Property Counsel  
3M Innovative Properties Company  
Facsimile No.: 651-736-3833